

Patent claims

1. A fast-acting composition for preparing cold and hot drinks from drinking water, preferably coffee or tea, which
5 comes into contact by immersion with the drinking water or brewing water at least briefly, for a period of a plurality of minutes and consists of cellulose fibers modified by chemical reaction with formation of phosphate ester groups and having an ion-exchange capacity of at least 50 mg of copper/g of
10 dried fiber.
2. The composition as claimed in claim 1, characterized in that the cellulose fibers are modified by phosphorylation with phosphoric acid or ammonium phosphate up to a phosphorus
15 content of from 3 to 8% by mass.
3. The composition as claimed in claim 1, characterized in that the cellulose fibers are carbamidated by chemical reaction with urea and are phosphorylated with phosphoric acid
20 or ammonium phosphate up to a nitrogen content of at least 1% by mass present in the form of carbamide groups and a phosphorus content of from 3 to 8% by mass.
4. The composition as claimed in one of claims 1 to 3,
25 characterized in that the amount of modified cellulose fibers used is from 0.5 g to 4 g per liter of drinking water.
5. The composition as claimed in one of claims 1 to 4, characterized in that the upper limit of the nitrogen content
30 is 4% by mass.
6. The composition as claimed in one of claims 1 to 5, characterized in that the phosphorus content is from 5 to 6.5% by mass and the nitrogen content is from 2 to 3% by mass and

the ion-exchange capacity is in the range from 100 to 130 mg of copper/g of dried fiber.

7. The composition as claimed in one of claims 1 to 6,
5 characterized in that the period of contact is from 3 to 10 min.

8. The composition as claimed in one of claims 1 to 7,
characterized in that the modified cellulose fibers are
10 converted into the sodium, potassium or magnesium form by subsequent treatment with a salt solution.

9. The composition as claimed in one of claims 1 to 7,
characterized in that the modified cellulose fibers are
15 converted into an acid/potassium or acid/magnesium form by subsequent treatment with an acidified salt solution and the fraction of free acid form has a pH of > 3 in water.

10. The composition as claimed in one of claims 1 to 9,
20 characterized in that this is used as a fiber product, the fibers being present in a metered amount in a bag made of water-permeable and food-standard material.

11. The composition as claimed in one of claims 1 to 9,
25 characterized in that this is used as a paper product which is obtained by wet-strengthening.

12. The composition as claimed in one of claims 1 to 9,
characterized in that this is formed as an additive-free
30 nonwoven fabric having a weight per unit area of from 100 to 500 g/m².

13. The composition as claimed in one of claims 1 to 12, characterized in that this is present, together with the drink base, in a water-permeable bag.

5 14. The composition as claimed in one of claims 1 to 13, characterized in that the cellulose fibers serve as feed material for production of tea bags.

10 15. The use of cellulose fibers which are carbamidated with urea and phosphorylated with phosphoric acid or ammonium phosphate up to a nitrogen content of at least 1% by mass in the form of carbamide groups and a phosphorus content of from 3 to 8% by mass, in the form of fibers, paper-like pieces, or as nonwoven fabric, for brief immersion in the preparation
15 water for hot or cold drinks to achieve a fast-acting taste improvement.

20 16. The use of cellulose fibers which are carbamidated with urea and are phosphorylated with phosphoric acid or ammonium phosphate up to a nitrogen content of at least 1% by mass present in the form of carbamide groups and a phosphorus content of from 3 to 8% by mass, in the form of fibers, paper-like pieces or as nonwoven fabric as additive to lay in tea bags or as feed material for producing tea bags.

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